Seat No.:	Enrolment No.
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-V • EXAMINATION - WINTER • 2014** 

	•	t Code: 1 t Name:			gy an	nd Wa	ater I	Resou	ırces	Engi			28-1	1-2(	)14
Ti	me: 1	10.30 an	-							0		_	Mai	rks:	<b>70</b>
1ns	truction 1 2 3 (a) (b)	. Attemp . Make so . Figures Discuss v	uitable to the various	assu right caus	<b>mptio</b> t <b>indic</b> ses of o	<b>ate full</b> drough	marks t.	S.	•						
Q.2	(a) (b)	Discuss water resources planning and its objectives.  Explain the methods of estimating flood.  Describe the flood routing with neat sketch.													
	<b>(b)</b>	OR  Differentiate between followings.  (i) Flood proofing and Flood forecasting (ii) Flood walls and Flood ways.													
Q.3	(a) (b)	Describe the process of the hydrological cycle with a neat sketch.  In a watershed, the average annual precipitation for four sub-basins was recorded as follows: 100.84,112.27,84.84 & 73.406 cm. the areas of the sub-basins were: 93264.3, 71243.5, 108808.2 & 168393.8 ha., calculate the average precipitation of the total watershed using the Thiessen method.  OR													
Q.3	(a) (b)	Discuss to The excect. the Calculate Time (h	ess rair rainfal the in ) ental	nfall ( 1 at e	direct each h tion inc	runoff our of dex of	) prod the s	asure i uced f torm i	rom a	10.0 c	m rainf	fall o gaug	f a stoge is	orm i	s 6.0 nder.
Q.4	(a) (b)	What is drainage basin? Discuss various characteristics of drainage basin.  The ordinates of a 4 h UH of a basin of area 300 km <sup>2</sup> measured at 1 h intervals are 6,36,66,91,106,93,79,68,58,49,41,34,27,23,17,13,9,6,3 and 1.5 m <sup>3</sup> /s respectively.  Obtain the ordinates of a 3 h UH for the basin using the S-curve technique.  OR													
Q.4	(a) (b)	Discuss to The direct is given be hydrogra.  Time (h) Direct runoff (m³/s)	et rund below.	ff hy	lrogra	ph resu	ılting f	ches. rom a							
Q.5	(a) (b)	and multipurpose reservoirs.  Discuss various classifications of hydropower plants.													
Q.5	(a) (b)	Explain to			-	e tank,		ocks		el, Dea	d stora	ge, r	eserv	oir y	ield.